MULTIMEDIA UNIVERSITY

STUDENT ID NO

MULTIMEDIA UNIVERSITY

FINAL EXAMINATION

TRIMESTER 2, 2022/2023

BAC 3674 – ADVANCED MANAGEMENT ACCOUNTING

(All sections / Groups)

10 JULY 2023
9.00 a.m. –12.00 p.m.
(3 Hours)

INSTRUCTIONS TO STUDENT:

1. This paper consists of **SEVEN (7)** pages excluding a cover page with **4** Questions only.
2. Answer **ALL** questions.
3. All questions carry equal marks and the distribution of marks for each question is given.
4. Please write all your answers in the Answer Booklet provided.

QUESTION 1

PART A

Microtic Manufacturing Sdn. Bhd. has four categories of overhead. The four categories and expected overhead costs for each category for next year are as follows:

	RM
Maintenance	80,000
Materials handling	40,000
Setups	35,000
Inspection	60,000
Total Manufacturing overhead	**215,000**

Currently, overhead is applied using a predetermined overhead rate based upon budgeted direct labor hours. 50,000 direct labor hours are budgeted for next year.

The company has been asked to submit a bid for a proposed job. The plant manager feels that obtaining this job would result in new business for future years. Usually, bids are based upon full manufacturing cost plus 30 percent.

Estimates for the proposed job are as follows:

Direct materials	RM2,500
Direct labour (750 hours)	RM3,750
Number of machine hours	300
Number of materials moves	8
Number of setups	3
Number of inspections	5

In the past, full manufacturing cost has been calculated by allocating overhead using a volume-based activity driver, i.e., direct labour hours. The plant manager has heard of a new way of applying overhead that uses cost pools and activity drivers.

Expected activity for the four activity drivers that would be used are:

Machine hours	16,000
Material moves	4,000
Setups	2,000
Quality inspections	8,000

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Required:

a) Determine the company's bid if volume-based costing is used, and the bid is based upon full manufacturing cost plus 30 per cent. (3 marks)

b) Determine the company's bid if activity-based costing is used, and the bid is based upon full manufacturing cost plus 30 per cent. (8 marks)

c) Which product costing method produces the most competitive bid? Explain why. (6 marks)

d) How can Microtic Manufacturing be assured that the mark up of 30% on full manufacturing cost is sufficient to cover non-manufacturing costs and desired profit? Explain. (3 marks)

PART B

HCCP Sdn. Bhd. (HC) provides skilled labour to the building trade. HC has recently been asked by a builder to bid for a kitchen fitting contract which requires 9,247 labour hours to fit an identical kitchen for 600 apartment units.

Cost information for the new contract is as below:

	RM
Direct labour (9,247 DLH x RM15 per hour)	138,705
Variable Overhead	?
Fixed Overhead	?
Total cost	?

HC normally works around 120,000 labour hours in a year and uses the high-low method to analyse its overheads.

Required:

Calculate the total cost for HC that it can use as a basis of the bid for the new contract. (5 marks)

[TOTAL 25 MARKS]

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QUESTION 2

MDG Bhd. manufactures a standard prefabricated concrete garage. For next year, the following are the estimated direct costs per unit:

Direct material	RM280
Direct labour (14 hours @ RM11.00)	RM154
Direct expenses	RM26
Total direct cost per unit	RM460

Production overheads are absorbed at RM15.00 per direct labour hour and non-production costs at RM134 per unit. Both absorption rates are based on an anticipated production/sales volume of 5,000 units next year. The company adds a profit margin of 25 per cent of sales value to the total cost per unit to arrive at the selling price.

Management wishes to increase next year's sales volume by 20 per cent (i.e., to 6,000 units) and believes that this could be achieved if the selling price per unit were RM984.

Required:

a) Determine whether the company's policy of "adding profit margin of 25 per cent of sales value to the total cost per unit in order to arrive at selling price" is likely to yield the increased sales volume desired by management. Show supporting calculations.
(9 marks)

b) What target cost is necessary if the company is to achieve profit of 25 per cent of sales value on a unit selling price of RM984?
(3 marks)

c) Assuming that a volume increase from 5,000 to 6,000 units will not incur any additional overhead costs, re-calculate the cost per unit for
   i) production overheads and
   ii) non-production overheads based on production volume of 6,000 units (work to the nearest RM)
(4 marks)

d) Using the new overhead costs from (c), confirm whether the target cost necessary to obtain the desired market share and earn the required profit will be achieved.
(5 marks)

e) Why is target costing preferred over cost-plus pricing? Explain. (4 marks)

[TOTAL 25 MARKS]

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QUESTION 3

PART A

Nordin Sihat is a face masks manufacturing company. One of its production activities is to make 3-ply surgical face masks for medical stores.

Nordin Sihat is considering the replacement of its mask-cutting machine that has been used for the past two years. If the new machine is purchased, it would be acquired at the end of year 3.

Management expects to sell 600,000 pieces of 3-ply masks in each of the next 5 years. The expected selling price is RM1.20 per piece.

Nordin Sihat will either keep the existing machine for another 5 years (8 years in total) or replace the existing machine at the end of year 3 with a new model that has a 5-year estimated life.

	Old Machine	**New Machine**
Original cost of machine at acquisition	RM100,000	RM1,400,000
Estimated salvage value at acquisition	RM30,000	RM50,000
Remaining useful life at the end of year 3	5 years	5 years
Expected annual cash operating expenses: - Variable costs per piece - Total fixed costs	 - -	 RM0.29 RM8,000
Estimated cash value (disposal) of machines: - End of year 3 - End of year 8	 RM60,000 -	 - RM40,000

Assume that Nordin Sihat is subject to a 20% corporation tax and that all cash flows occur at the end of the year except for the initial investment. Also assume that straight-line depreciation is used for tax purposes and that any tax associated with the disposal of machinery occurs at the same time of the related transaction.

All calculations are to be rounded up to its nearest RM.

Required:

a) Compute the relevant after-tax cash flows of the purchase of the new machine, at each of the following three points:
   i. project initiation (Year 3), (3 marks)
   ii. project operation (Year 4-8), (3 marks)
   iii. project disposal (Year 8) (3 marks)

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b) Based on the calculations in (a), compute the net present value to determine whether Nordin Sihat should acquire the new machine. Nordin Sihat's required rate of return (discount rate) is 10%.

Note: The present value of RM1 is as below:

Year	1	2	3	4	5
Discount rate (10%)	0.909	0.826	0.751	0.683	0.621

(3 marks)

c) Based on your answers to requirement (b), assess TWO qualitative factors that Nordin Sihat should consider. (4 marks)

PART B

Indera Bersih Bhd. is a mining company which had incurred the following environmental quality-related costs for the year ended 2022:

	RM
Employee training	100,000
Product design	140,000
Supplier certification	40,000
Process inspection	320,000
Depreciation – pollution-control equipment	400,000
Maintain pollution-control equipment	200,000
Clean up polluted river	500,000
Restore land after use	700,000
Property damage claim	600,000

Other information concerning the performance of Indera Bersih Bhd. for the year ended 2022 as follows:

	RM
Total operating expenses	10,000,000
Total assets at beginning of year	7,400,000
Total assets at end of year	9,900,000
Sales	10,500,000

Required:

a) Prepare a cost-of-quality (COQ) report of environmental management for the year ended 2022. Compute subtotals for each of the four reporting categories and express each subtotal as a percentage of total operating expenses for the year. (7 marks)

b) Based on the report that you prepare in (a), interpret the company's environmental quality performance for the year. (2 marks)

[TOTAL 25 MARKS]

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QUESTION 4

PART A

Mariah Investments has three divisions (A, B, C) organised for performance-evaluation purposes as investment centres. Each division's required rate of return for purposes of calculating residual income (RI) is 15%. Budgeted operating results for 2023 for each of the three divisions are as follows:

Division	Operating income	Investment
A	RM 15,000,000	RM 100,000,000
B	RM 25,000,000	RM 125,000,000
C	RM 11,000,000	RM 50,000,000

The company is planning an expansion, which will require each division to increase its investments by RM25,000,000 and its income by RM4,500,000.

Required:

a) Compute the current ROI and residual income for each division.

(3 marks)

b) Rank the divisions according to their current ROIs and residual incomes.

(2 marks)

c) Compute the effects after adding the new project to each division's ROI and residual income.

(3 marks)

d) Assuming the managers are evaluated on either ROI or residual income, which division(s) are pleased with the expansion and which one(s) are unhappy? Explain.

(4 marks)

e) Mariah Investments are thinking about implementing a Balanced Scorecard approach to performance management. Explain FOUR different perspectives of the Balanced Scorecard with illustration of TWO non-financial performance measures for each perspective.

(8 marks)

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PART B

The Controller of Nice2See Sdn. Bhd. has studied the possibility of implementing a JIT production system. The annual incremental retooling costs of the JIT system is projected to be about RM67,000 however, the new system will lower insurance costs by RM10,000 and storage costs will drop by RM20,000 a year as the company will be able to reuse warehouse space for other strategic purposes.

In addition, material handling costs will drop by RM10,000 a year and because of a resulting increase in quality and faster delivery, the company's contribution margin on the product will increase by RM2.00 on annual sales of 20,000 units.

Required:

Compute the net incremental benefit of the JIT system implementation.

(5 marks)

[TOTAL 25 MARKS]

(GRAND TOTAL 100 MARKS)

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